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DATE: Tuesday, February 08, 2005

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		<i>DB=PGPB,USPT; PLUR=YES; OP=ADJ</i>	
<input type="checkbox"/>	L10	l6 and rice	5
<input type="checkbox"/>	L9	L8 and rice	5
<input type="checkbox"/>	L8	l6 and (rice or arabidopsis)	5
<input type="checkbox"/>	L7	l4 and (rice or arabidopsis)	23
<input type="checkbox"/>	L6	l2 and l3	5
<input type="checkbox"/>	L5	proline dehydrogenase or prodh	43
<input type="checkbox"/>	L4	proline dehydrogenase or prodh	43
<input type="checkbox"/>	L3	proline dehydrogenase or prodh	43
<input type="checkbox"/>	L2	L1 and transgenic	61
<input type="checkbox"/>	L1	p5cs	139

END OF SEARCH HISTORY

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TERMINAL (ENTER 1, 2, 3, OR ?):2

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NEWS	1		Web Page URLs for STN Seminar Schedule - N. America
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NEWS	5	NOV 30	PHAR reloaded with additional data
NEWS	6	DEC 01	LISA now available on STN
NEWS	7	DEC 09	12 databases to be removed from STN on December 31, 2004
NEWS	8	DEC 15	MEDLINE update schedule for December 2004
NEWS	9	DEC 17	ELCOM reloaded; updating to resume; current-awareness alerts (SDIs) affected
NEWS	10	DEC 17	COMPUAB reloaded; updating to resume; current-awareness alerts (SDIs) affected
NEWS	11	DEC 17	SOLIDSTATE reloaded; updating to resume; current-awareness alerts (SDIs) affected
NEWS	12	DEC 17	CERAB reloaded; updating to resume; current-awareness alerts (SDIs) affected
NEWS	13	DEC 17	THREE NEW FIELDS ADDED TO IFIPAT/IFIUDB/IFICDB
NEWS	14	DEC 30	EPFULL: New patent full text database to be available on STN
NEWS	15	DEC 30	CAPLUS - PATENT COVERAGE EXPANDED
NEWS	16	JAN 03	No connect-hour charges in EPFULL during January and February 2005
NEWS	17	JAN 26	CA/CAPLUS - Expanded patent coverage to include the Russian Agency for Patents and Trademarks (ROSPATENT)
NEWS EXPRESS			JANUARY 10 CURRENT WINDOWS VERSION IS V7.01a, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 10 JANUARY 2005
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NEWS INTER			General Internet Information
NEWS LOGIN			Welcome Banner and News Items
NEWS PHONE			Direct Dial and Telecommunication Network Access to STN
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FILE 'HOME' ENTERED AT 14:58:35 ON 08 FEB 2005

=> file agricola caplus biosis

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

0.21

0.21

FILE 'AGRICOLA' ENTERED AT 14:58:42 ON 08 FEB 2005

FILE 'CAPLUS' ENTERED AT 14:58:42 ON 08 FEB 2005

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FILE 'BIOSIS' ENTERED AT 14:58:42 ON 08 FEB 2005

Copyright (c) 2005 The Thomson Corporation.

=> s ((yoshiba, y?) or (yoshiba y?))/au

L1 55 ((YOSHIBA, Y?) OR (YOSHIBA Y?))/AU

=> s l1 and (p5cs or prodh or proline dehydrogenase)

L2 21 L1 AND (P5CS OR PRODH OR PROLINE DEHYDROGENASE)

=> dup rem l2

PROCESSING COMPLETED FOR L2

L3 10 DUP REM L2 (11 DUPLICATES REMOVED)

=> d 1-10 ti

L3 ANSWER 1 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN

TI Construction of stress tolerant transgenic grass plants with altered proline biosynthesis expressing a  $\Delta$ 1-pyrroline-5-carboxylate synthetase gene or an antisense **proline dehydrogenase** gene

L3 ANSWER 2 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 1

TI Molecular cloning and characterization of a cDNA encoding proline transporter in rice

L3 ANSWER 3 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 2

TI Antisense suppression of proline degradation improves tolerance to freezing and salinity in Arabidopsis thaliana

L3 ANSWER 4 OF 10 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2005) on STN DUPLICATE 3

TI Biological functions of proline in morphogenesis and osmotolerance revealed in antisense transgenic Arabidopsis thaliana.

L3 ANSWER 5 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN

TI Increase of proline content in transgenic rice plants with a **proline dehydrogenase** antisense cDNA

L3 ANSWER 6 OF 10 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2005) on STN DUPLICATE 4

TI Regulation of levels of proline as an osmolyte in plants under water stress.

L3 ANSWER 7 OF 10 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2005) on STN DUPLICATE 5

TI Characterization of the gene for delta 1-pyrroline-5-carboxylate

synthetase and correlation between the expression of the gene and salt tolerance in *Oryza sativa* L.

- L3 ANSWER 8 OF 10 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2005) on STN DUPLICATE 6
- TI A nuclear gene encoding mitochondrial **proline dehydrogenase**, an enzyme involved in proline metabolism, is upregulated by proline but downregulated by dehydration in *Arabidopsis*.
- L3 ANSWER 9 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN
- TI Water stress-induced genes in *Arabidopsis thaliana*
- L3 ANSWER 10 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 7
- TI Correlation between the induction of a gene for  $\Delta 1$ -pyrroline-5-carboxylate synthetase and the accumulation of proline in *Arabidopsis thaliana* under osmotic stress

=> d 1-10 ti

- L3 ANSWER 1 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN
- TI Construction of stress tolerant transgenic grass plants with altered proline biosynthesis expressing a  $\Delta 1$ -pyrroline-5-carboxylate synthetase gene or an antisense **proline dehydrogenase** gene
- L3 ANSWER 2 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 1
- TI Molecular cloning and characterization of a cDNA encoding proline transporter in rice
- L3 ANSWER 3 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 2
- TI Antisense suppression of proline degradation improves tolerance to freezing and salinity in *Arabidopsis thaliana*
- L3 ANSWER 4 OF 10 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2005) on STN DUPLICATE 3
- TI Biological functions of proline in morphogenesis and osmotolerance revealed in antisense transgenic *Arabidopsis thaliana*.
- L3 ANSWER 5 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN
- TI Increase of proline content in transgenic rice plants with a **proline dehydrogenase** antisense cDNA
- L3 ANSWER 6 OF 10 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2005) on STN DUPLICATE 4
- TI Regulation of levels of proline as an osmolyte in plants under water stress.
- L3 ANSWER 7 OF 10 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2005) on STN DUPLICATE 5
- TI Characterization of the gene for  $\Delta 1$ -pyrroline-5-carboxylate synthetase and correlation between the expression of the gene and salt tolerance in *Oryza sativa* L.
- L3 ANSWER 8 OF 10 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States

of America. It contains copyrighted materials. All rights reserved.  
(2005) on STN DUPLICATE 6

TI A nuclear gene encoding mitochondrial **proline dehydrogenase**, an enzyme involved in proline metabolism, is upregulated by proline but downregulated by dehydration in Arabidopsis.

L3 ANSWER 9 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN  
TI Water stress-induced genes in Arabidopsis thaliana

L3 ANSWER 10 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 7  
TI Correlation between the induction of a gene for  $\Delta 1$ -pyrroline-5-carboxylate synthetase and the accumulation of proline in Arabidopsis thaliana under osmotic stress

```
=> s ((shinozaki k?) or (shinozaki, k?))/auy
'AUY' IS NOT A VALID FIELD CODE
'AUY' IS NOT A VALID FIELD CODE
'AUY' IS NOT A VALID FIELD CODE
L4 0 ((SHINOZAKI K?) OR (SHINOZAKI, K?))/AUY
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=> s ((shinozaki k?) or (shinozaki, k?))/au
L5 2217 ((SHINOZAKI K?) OR (SHINOZAKI, K?))/AU
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=> s l5 and (p5cs or prodh or proline dehydrogenase)
L6 40 L5 AND (P5CS OR PRODH OR PROLINE DEHYDROGENASE)
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=> dup rem l6
PROCESSING COMPLETED FOR L6
L7 20 DUP REM L6 (20 DUPLICATES REMOVED)
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=> d 1-10 ti
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L7 ANSWER 1 OF 20 CAPLUS COPYRIGHT 2005 ACS on STN  
TI Rice stress-inducible promoters a022 (LIP9) and a066 (WSI724) and their use for plant stress tolerance

L7 ANSWER 2 OF 20 CAPLUS COPYRIGHT 2005 ACS on STN  
TI DNA sequences of rice stress response promoters and their use for plant stress resistance

L7 ANSWER 3 OF 20 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved.  
(2005) on STN DUPLICATE 1

TI Comparative genomics in salt tolerance between Arabidopsis and Arabidopsis-related halophyte salt cress using Arabidopsis microarray.

L7 ANSWER 4 OF 20 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved.  
(2005) on STN DUPLICATE 2

TI A novel subgroup of bZIP proteins functions as transcriptional activators in hypoosmolarity-responsive expression of the **proDH** gene in Arabidopsis.

L7 ANSWER 5 OF 20 CAPLUS COPYRIGHT 2005 ACS on STN  
TI Monitoring expression profiles of Arabidopsis gene expression during rehydration process after dehydration using ca. 7000 full-length cDNA microarray

L7 ANSWER 6 OF 20 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved.

- (2005) on STN DUPLICATE 3
- TI Toxicity of free proline revealed in an Arabidopsis T-DNA-tagged mutant deficient in **proline dehydrogenase**.
- L7 ANSWER 7 OF 20 CAPLUS COPYRIGHT 2005 ACS on STN
- TI Construction of stress tolerant transgenic grass plants with altered proline biosynthesis expressing a  $\Delta$ 1-pyrroline-5-carboxylate synthetase gene or an antisense **proline dehydrogenase** gene
- L7 ANSWER 8 OF 20 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2005) on STN DUPLICATE 4
- TI ACTCAT, a novel cis-acting element for proline- and hypoosmolarity-responsive expression of the **ProDH** gene encoding **proline dehydrogenase** in Arabidopsis.
- L7 ANSWER 9 OF 20 CAPLUS COPYRIGHT 2005 ACS on STN
- TI Proline degradation enzyme antisense suppression for plant stress tolerance improvement
- L7 ANSWER 10 OF 20 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation. on STN
- TI Promoter analysis of **ProDH** gene induced by hypoosmolarity and L-Pro in Arabidopsis thaliana.

=> d 11-20 ti

- L7 ANSWER 11 OF 20 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 5
- TI Molecular cloning and characterization of a cDNA encoding proline transporter in rice
- L7 ANSWER 12 OF 20 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 6
- TI Antisense suppression of proline degradation improves tolerance to freezing and salinity in Arabidopsis thaliana
- L7 ANSWER 13 OF 20 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2005) on STN DUPLICATE 7
- TI Biological functions of proline in morphogenesis and osmotolerance revealed in antisense transgenic Arabidopsis thaliana.
- L7 ANSWER 14 OF 20 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2005) on STN DUPLICATE 8
- TI A gene encoding **proline dehydrogenase** is not only induced by proline and hypoosmolarity, but is also developmentally regulated in the reproductive organs of Arabidopsis.
- L7 ANSWER 15 OF 20 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation. on STN
- TI Expression analysis of the *erd5* gene that encodes **proline dehydrogenase** in Arabidopsis thaliana.
- L7 ANSWER 16 OF 20 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2005) on STN DUPLICATE 9
- TI Regulation of levels of proline as an osmolyte in plants under water stress.

- L7 ANSWER 17 OF 20 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2005) on STN DUPLICATE 10
- TI Characterization of the gene for delta 1-pyrroline-5-carboxylate synthetase and correlation between the expression of the gene and salt tolerance in *Oryza sativa* L.
- L7 ANSWER 18 OF 20 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2005) on STN DUPLICATE 11
- TI A nuclear gene encoding mitochondrial **proline dehydrogenase**, an enzyme involved in proline metabolism, is upregulated by proline but downregulated by dehydration in *Arabidopsis*.
- L7 ANSWER 19 OF 20 CAPLUS COPYRIGHT 2005 ACS on STN
- TI Water stress-induced genes in *Arabidopsis thaliana*
- L7 ANSWER 20 OF 20 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 12
- TI Correlation between the induction of a gene for  $\Delta$ 1-pyrroline-5-carboxylate synthetase and the accumulation of proline in *Arabidopsis thaliana* under osmotic stress

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NEWS	11	DEC 17	SOLIDSTATE reloaded; updating to resume; current-awareness alerts (SDIs) affected
NEWS	12	DEC 17	CERAB reloaded; updating to resume; current-awareness alerts (SDIs) affected
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NEWS	14	DEC 30	EPFULL: New patent full text database to be available on STN
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NEWS	17	JAN 26	CA/CAPLUS - Expanded patent coverage to include the Russian Agency for Patents and Trademarks (ROSPATENT)
NEWS EXPRESS			JANUARY 10 CURRENT WINDOWS VERSION IS V7.01a, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 10 JANUARY 2005
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NEWS INTER			General Internet Information
NEWS LOGIN			Welcome Banner and News Items
NEWS PHONE			Direct Dial and Telecommunication Network Access to STN
NEWS WWW			CAS World Wide Web Site (general information)

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 that are available. If you have requested multiple files, you can  
 specify a corrected file name or you can enter "IGNORE" to continue  
 accessing the remaining file names entered.

ENTER A FILE NAME OR (IGNORE):agricola

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.21	0.21

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=> s p5cs and (rice or arabidopsis)

L1 89 P5CS AND (RICE OR ARABIDOPSIS)

=> dup rem l7

L7 IS NOT VALID HERE

The L-number entered has not been defined in this session, or it  
 has been deleted. To see the L-numbers currently defined in this  
 session, enter DISPLAY HISTORY at an arrow prompt (=>).

=> dup rem l1

PROCESSING COMPLETED FOR L1

L2 51 DUP REM L1 (38 DUPLICATES REMOVED)

=> d 1-10 ti

L2 ANSWER 1 OF 51 CAPLUS COPYRIGHT 2005 ACS on STN

TI **Rice** stress-inducible promoters a022 (LIP9) and a066 (WSI724)  
 and their use for plant stress tolerance

L2 ANSWER 2 OF 51 CAPLUS COPYRIGHT 2005 ACS on STN

TI Sequence homologs of stress response-associated transcription factors from  
 plants and their use in modulating intermediary metabolism to improve  
 biomass yields and stress resistance

L2 ANSWER 3 OF 51 CAPLUS COPYRIGHT 2005 ACS on STN

TI DNA sequences of **rice** stress response promoters and their use  
 for plant stress resistance

L2 ANSWER 4 OF 51 CAPLUS COPYRIGHT 2005 ACS on STN

TI Phospholipase D Is a Negative Regulator of Proline Biosynthesis in  
**Arabidopsis** thaliana

L2 ANSWER 5 OF 51 AGRICOLA Compiled and distributed by the National  
 Agricultural Library of the Department of Agriculture of the United States  
 of America. It contains copyrighted materials. All rights reserved.  
 (2005) on STN DUPLICATE 1

TI Comparative genomics in salt tolerance between **Arabidopsis** and  
**Arabidopsis**-related halophyte salt cress using **Arabidopsis**  
 microarray.

L2 ANSWER 6 OF 51 CAPLUS COPYRIGHT 2005 ACS on STN

TI  $\beta$ -amylase induction and the protective role of maltose during  
 temperature shock

L2 ANSWER 7 OF 51 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 2  
 TI Stress-inducible synthesis of proline in transgenic **rice** confers faster growth under stress conditions than that with constitutive synthesis

L2 ANSWER 8 OF 51 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 3  
 TI Stress-inducible OsP5CS2 gene is essential for salt and cold tolerance in **rice**

L2 ANSWER 9 OF 51 CAPLUS COPYRIGHT 2005 ACS on STN  
 TI Proline accumulation and AtP5CS2 gene activation are induced by plant-pathogen incompatible interactions in **Arabidopsis**

L2 ANSWER 10 OF 51 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 4  
 TI Proline accumulation and  $\Delta$ 1-pyrroline-5-carboxylate synthetase gene properties in three **rice** cultivars differing in salinity and drought tolerance

=> d ab

L2 ANSWER 1 OF 51 CAPLUS COPYRIGHT 2005 ACS on STN  
 AB This invention provides two **rice** stress-inducible promoters,; and use in generating environmental stress-tolerant plants. Structural gene or regulatory gene that enhances stress-tolerance may be operably linked to the promoter and introduced into plants.  $\Delta$ 1-Pyrroline-5-carboxylate synthetase (**P5CS**) gene, galactinol synthase gene AtGolS3, **Arabidopsis** transcription factor DREB (dehydration-responsive element binding) gene, **rice** DREB homolog OsDREB gene, abscisic acid (ABA) biosynthesis enzyme 9-cis-epoxycarotenoid dioxygenase (NCED), in particular can be linked to the promoter and expressed. In **rice**, the authors isolated promoter regions for two stress-inducible genes: a022 (LIP9) and a066 (WSI724). The LIP9 or WSI724 induced the transcription of the GUS reporter gene in **rice** and tobacco, in response to drought, high-salt, and/or cold stresses. Expression of LIP9 or WSI724 genes was elevated in transgenic **rice** carrying OsDREB1A or DREB1C genes. These promoters are potentially useful for producing transgenic monocots that are tolerant to drought, high-salt, and/or cold stresses.

=> d so

L2 ANSWER 1 OF 51 CAPLUS COPYRIGHT 2005 ACS on STN  
 SO PCT Int. Appl., 55 pp.  
 CODEN: PIXXD2

=> d pi

L2	ANSWER 1 OF 51 CAPLUS COPYRIGHT 2005 ACS on STN				
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	WO 2004085641	A1	20041007	WO 2004-JP2563	20040302
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,				

SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN,  
TD, TG

=> d 2 ab

L2 ANSWER 2 OF 51 CAPLUS COPYRIGHT 2005 ACS on STN  
AB Synthetic transcription factors including a domain binding a CCG sequence in the regulatory region of a plant gene are described. The preferred domains are AP2 domains from plant C-repeat/DRE binding factors. When these proteins are present at high levels, the plant exhibits increased tolerance to environmental stresses such as cold, freezing, drought or high salinity. This is achieved by increasing the plant biomass and levels of a cell protectant in a plant, such as sucrose or proline. The genes were identified by screening cDNA libraries from stressed **Arabidopsis thaliana** for C-repeat/DRE binding proteins using a two hybrid assay system.

=> d 2 so

L2 ANSWER 2 OF 51 CAPLUS COPYRIGHT 2005 ACS on STN  
SO U.S., 156 pp., Cont.-in-part of U.S. 6,417,428.  
CODEN: USXXAM

=> d 2 pi

L2 ANSWER 2 OF 51 CAPLUS COPYRIGHT 2005 ACS on STN

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6706866	B1	20040316	US 2000-601802	20000915
US 5892009	A	19990406	US 1996-706270	19960904
US 6417428	B1	20020709	US 1998-198119	19981123
WO 9938977	A2	19990805	WO 1999-US1895	19990128
WO 9938977	A3	19991028		
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 2003233680	A1	20031218	US 2003-421138	20030423

=> d 3 ab

L2 ANSWER 3 OF 51 CAPLUS COPYRIGHT 2005 ACS on STN  
AB This invention provides DNA sequences of two **rice** stress response promoters, Salt and OsNAC6. The promoter Salt and OsNAC6 regulated gene expression under cold and dry stress, resp. The promoter Salt and OsNAC6 provided in this invention can be used for plant stress resistance.

=> d 11-20 ti

L2 ANSWER 11 OF 51 CAPLUS COPYRIGHT 2005 ACS on STN  
TI Monitoring expression profiles of **Arabidopsis** gene expression during rehydration process after dehydration using ca. 7000 full-length cDNA microarray

L2 ANSWER 12 OF 51 CAPLUS COPYRIGHT 2005 ACS on STN  
 TI Production of cDNA from mRNA of P5CS coding gene in *Arabidopsis thaliana*

L2 ANSWER 13 OF 51 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2005) on STN , DUPLICATE 5  
 TI Light-dependent induction of proline biosynthesis by abscisic acid and salt stress is inhibited by brassinosteroid in *Arabidopsis*.

L2 ANSWER 14 OF 51 CAPLUS COPYRIGHT 2005 ACS on STN  
 TI Drought-regulated expression of prolyl-tRNA synthetase genes in radish (*Raphanus sativus*) seedlings

L2 ANSWER 15 OF 51 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 6  
 TI Transgenic indica rice cvIR-50 over-expressing *Vigna aconitifolia*  $\Delta$ 1-pyrroline-5-carboxylate synthetase cDNA shows tolerance to high salt

L2 ANSWER 16 OF 51 CAPLUS COPYRIGHT 2005 ACS on STN  
 TI Stable integration of transgenes in tobacco

L2 ANSWER 17 OF 51 CAPLUS COPYRIGHT 2005 ACS on STN  
 TI Stress-regulated expression constructs and transgenic plants having altered environmental stress tolerance

L2 ANSWER 18 OF 51 CAPLUS COPYRIGHT 2005 ACS on STN  
 TI Construction of stress tolerant transgenic grass plants with altered proline biosynthesis expressing a  $\Delta$ 1-pyrroline-5-carboxylate synthetase gene or an antisense proline dehydrogenase gene

L2 ANSWER 19 OF 51 CAPLUS COPYRIGHT 2005 ACS on STN  
 TI Regulation of osmotic stress-responsive gene expression by the LOS6/ABA1 locus in *Arabidopsis*

L2 ANSWER 20 OF 51 CAPLUS COPYRIGHT 2005 ACS on STN  
 TI Effects of hydrogen peroxide and nitric oxide on both salt and heat stress tolerance in rice

=> s p5cs and (prodh or proline dehydrogenase)  
 L3 30 P5CS AND (PRODH OR PROLINE DEHYDROGENASE)

=> dup rem l3  
 PROCESSING COMPLETED FOR L3  
 L4 18 DUP REM L3 (12 DUPLICATES REMOVED)

=> d 1-10 ti

L4 ANSWER 1 OF 18 CAPLUS COPYRIGHT 2005 ACS on STN  
 TI Phospholipase D Is a Negative Regulator of Proline Biosynthesis in *Arabidopsis thaliana*

L4 ANSWER 2 OF 18 CAPLUS COPYRIGHT 2005 ACS on STN  
 TI Importance of N source on heat stress tolerance due to the accumulation of proline and quaternary ammonium compounds in tomato plants

L4 ANSWER 3 OF 18 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 1  
 TI The effect of NaCl on proline accumulation in potato seedlings and calli

L4 ANSWER 4 OF 18 CAPLUS COPYRIGHT 2005 ACS on STN  
 TI Monitoring expression profiles of *Arabidopsis* gene expression during

rehydration process after dehydration using ca. 7000 full-length cDNA microarray

- L4 ANSWER 5 OF 18 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2005) on STN DUPLICATE 2
- TI Light-dependent induction of proline biosynthesis by abscisic acid and salt stress is inhibited by brassinosteroid in Arabidopsis.
- L4 ANSWER 6 OF 18 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 3
- TI The control of proline consumption by abscisic acid during osmotic stress recovery of canola leaf discs
- L4 ANSWER 7 OF 18 CAPLUS COPYRIGHT 2005 ACS on STN
- TI Drought-regulated expression of prolyl-tRNA synthetase genes in radish (*Raphanus sativus*) seedlings
- L4 ANSWER 8 OF 18 CAPLUS COPYRIGHT 2005 ACS on STN
- TI Plant molecular mechanism of proline accumulation under water stress
- L4 ANSWER 9 OF 18 CAPLUS COPYRIGHT 2005 ACS on STN
- TI Construction of stress tolerant transgenic grass plants with altered proline biosynthesis expressing a  $\Delta 1$ -pyrroline-5-carboxylate synthetase gene or an antisense **proline dehydrogenase** gene
- L4 ANSWER 10 OF 18 CAPLUS COPYRIGHT 2005 ACS on STN
- TI Effects of ABA and NaCl on metabolism of polyamines and proline in *Suaeda glauca* Bunge

=> d 2 ab

- L4 ANSWER 2 OF 18 CAPLUS COPYRIGHT 2005 ACS on STN
- AB Proline and quaternary ammonium compds. (QAC), in addition to being N-rich, are known to accumulate in plants under different environmental stress conditions. The accumulation of N-rich compds. in plants has been shown to confer stress resistance. The aim of our work is two-fold:.. First, to study the influence of temperature on proline, QAC, and choline metabolism in tomato leaves; and. Second, to investigate the relationship between N source applied (NO<sub>3</sub><sup>-</sup> or NH<sub>4</sub><sup>+</sup>) and thermal stress resistance in these plants. To do this, expts. were conducted at three different temps. (10°C, 25°C, 35°C); at each temperature half of the plants received NO<sub>3</sub><sup>-</sup>, and the other half received NH<sub>4</sub><sup>+</sup>. At 35°C the plants had the lowest biomass production with respect to 25°C (optimal temperature) and 10°C (cold stress), suggesting that tomato plants were most affected by heat stress. At 35°C, there were also high levels of choline and proline due to the activation of  $\Delta 1$ -pyrroline-5-carboxylate synthetase (**P5CS**) and ornithine aminotransferase (OAT), and simultaneous inhibition of **proline dehydrogenase** (PDH) and proline oxidase (PO). However, plants with NH<sub>4</sub><sup>+</sup> as the N source exhibited reduced growth with respect to the plants fed with NO<sub>3</sub><sup>-</sup>. This is interesting because, under heat stress (35°C), biomass production, as well as proline and choline accumulation, in NH<sub>4</sub><sup>+</sup> fed plants was higher than in NO<sub>3</sub><sup>-</sup> fed plants. From this, we concluded that tomato plants fed with NH<sub>4</sub><sup>+</sup> as the N source show higher tolerance to heat stress (35°C) than plants fed with NO<sub>3</sub><sup>-</sup>.

=> d 3 ab

- L4 ANSWER 3 OF 18 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 1

AB The effects of salt stress were studied on the accumulation and metabolism of proline and its correlation with Na<sup>+</sup> and K<sup>+</sup> content in shoots and callus tissue of four potato cultivars, viz., Agria, Kennebec (relatively salt tolerant), Diamant and Ajax (relatively salt sensitive). Na<sup>+</sup> and proline contents increased in all cultivars under salt stress. However, K<sup>+</sup> and protein contents decreased in response to NaCl treatments. The activities of enzymes involved in proline metabolism,  $\Delta^1$ -pyrroline-5-carboxylate synthetase (P5CS) and proline dehydrogenase (ProDH) increased and decreased, resp., in response to elevated NaCl concns. The changes of P5CS and ProDH activities in more salt sensitive cultivars (Diamant, Ajax) were more than those in the tolerant ones. Then the stimulation of synthesis in combination with a partially increase of protein proteolysis, a decrease in proline utilization and inhibition of oxidation resulted in high proline contents in seedlings and calli under salt stress. In callus tissue, reduced growth and cell size may be partially responsible for high proline accumulation in response to high NaCl levels. However, although the basic proline contents in the seedlings of more salt tolerant cultivars were higher than the sensitive ones, a clear relationship was not generally observed between accumulation of proline and salt tolerance in potato.

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AU Rahnama, H.; Ebrahimzadeh, H.